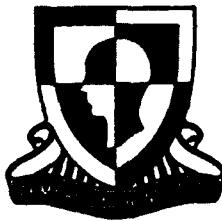


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U.S. Army Research Institute
for the Behavioral and Social Sciences

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Research Report 1655

An Approach to Identifying Future Brigade Tasks

J. Douglas Dressel
U.S. Army Research Institute

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December 1993

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13. ABSTRACT (Maximum 200 words) This Research Report describes the development and initial test of an approach to collect Brigade training information from military experts. Central to the approach is the use of battlefield situations that Army military officers can respond to in an open, nonevaluative fashion. The situations represent futuristic battles that a Brigade must take part in to accomplish its mission. Army experts are asked to identify the tasks that would have to be performed to achieve success in combat. Preliminary results of the task data and conclusions about the approach are presented.			
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An Approach to Identifying Future Brigade Tasks

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FOREWORD

This report describes an interview approach by which researchers can obtain information from subject matter experts (SMEs) without biasing or constraining them. Although this approach was applied to identifying tasks that Brigades of the future must perform to succeed, it can be applied to a variety of military and civilian situations in which the researcher provides a context to which the SME can respond.

This effort is part of the Military Operational Simulation and Evaluation Systems task conducted by the Battlefield Training Assessment Technical Area of the Training Systems Research Division. The effort is supported as an inhouse technological base project. Preliminary results of this research have been presented to representatives of Training and Doctrine Command at Fort Monroe, Virginia and Fort Leavenworth, Kansas.



EDGAR M. JOHNSON
Director

AN APPROACH TO IDENTIFYING FUTURE BRIGADE TASKS

EXECUTIVE SUMMARY

Requirement:

The post-Cold War military environment will change missions and roles for U.S. Army combat units. Given the dynamics of the modern battlefield, the need for rapid deployment, and the estimates of future limited conflicts, the future Brigade may have to operate as a detached maneuver force. To develop efficient training strategies for the Brigade's new role, the critical tasks for that role must be identified.

Procedure:

The approach used futuristic battle scenarios to collect Brigade training information from U.S. Army officers with Brigade experience. During individual interviews, the officers indicated tasks in the battle scenarios that the Brigade would have to perform in order to accomplish its mission.

Findings:

The participants readily responded to the scenario-driven interview approach. They identified six areas of increased concern to future Brigades: reconnaissance, rehearsal, issuance of warning orders, logistics planning, full utilization of combat assets, and planning beyond the initial battle.

Utilization of Findings:

The approach presented is recommended as a means to gather information from subject matter experts without biasing or constraining their responses. The findings suggest six areas that the Army should use to organize training strategies for maneuver Brigades. Additional data will be obtained to supplement these findings.

AN APPROACH TO IDENTIFYING FUTURE BRIGADE TASKS

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AN APPROACH TO IDENTIFYING FUTURE BRIGADE TASKS

INTRODUCTION

Reductions in the Soviet military threat will change missions and roles for U.S. Army combat units. For example, the Brigade has been used as a headquarters for Battalion and Division coordination. In its emerging role, it may operate as a detached, maneuver force, especially for mid-intensity, third-world conflicts. Modified, more efficient training strategies are needed to accommodate the Brigade's new mission requirements and reduced budgets.

A variety of training events are available for possible inclusion when developing these maneuver Brigade training strategies. The Army has developed instrumented ranges for unit training, including the National Training Center (NTC) and the other Combat Training Centers (CTCs). In addition, distributed simulation networks (SIMNET) and interactive wargames/simulations are emerging to augment unit training options. The variety of existing technologies for training can support innovative cost-effective maneuver Brigade training strategies for both active and reserve components.

The Army's Combined Arms Training Strategy (CATS) gives broad guidance and templates for developing such strategies. However, it does not provide an applicable methodology for doing so. One of the U.S. Army Research Institute for the Behavioral and Social Sciences' missions is to develop this methodology.

A first step in developing this methodology for determining training strategies is to ascertain the critical tasks for future maneuver Brigades. Only by knowing these tasks can the various training technologies, devices, and events be used to the best advantage. This report presents both an approach for identifying these tasks and the preliminary results of one application. The approach essentially involves presenting futuristic battle scenarios to experienced officers who identify the tasks the Brigade must perform to succeed. The approach was designed to elicit expert knowledge without biasing or constraining the officers' responses.

METHOD

Scenario Development

Two battle scenarios were created that featured conditions Brigades of the future would likely encounter. These conditions were derived from consulting both military doctrinal sources and

Army personnel. The conditions would include operating: (a) as a detached force, (b) in a nonlinear environment, (c) in a highly fluid battlefield, (d) with interrupted communications, and, (e) on a subordinate leader's initiative within the framework of the commander's intent.

The scenarios, were prepared in two formats that were pilot-tested to select the preferred format. One format presented the situation in the form of an abbreviated operations order (OPORD). The other format was a prose description of the situation. Five U.S. Army officers were asked to read both formats and give comments regarding clarity and preference. Initially, the officers preferred the familiar OPORD format. However, familiarity with the format led to content expectations which were not met and therefore became distracting. The officers had no such distraction with the prose description and understood the battle situation. The prose format was therefore selected and used in the interview.

The scenarios themselves represented two possible situations for a maneuver Brigade. These scenarios were developed with U.S. Army officers and reviewed by other officers for accuracy of content and conditions. An offensive scenario had the Brigade fighting initially as part of the division attack, then continuing on its own. A defensive scenario had the Brigade isolated and defending a bridgehead until the Brigade could be re-linked with the division. The offensive and defensive scenarios are located in Appendices A and B, respectively.

Participants

Eleven U.S. Army officers, including one recent retiree, participated in the interviews. All officers were Lieutenant Colonels with an average of 21 years of service either in armor or infantry. All officers had brigade or battalion experience and included four Desert Storm battalion commanders.

Procedure

The interviews were conducted individually. Several days prior to the interview, each officer received an interview packet consisting of an introductory page, stating the background and the intent of the research that the interview would serve, and either a defensive or offensive scenario. The introductory page is located in Appendix C.

A semi-structured interview approach was used. At the start of the session, the interviewer insured through verbatim instructions and discussions that participants understood the purpose of the interview and the battle scenario.

During the course of the interview, the interview questions were read to the participant. Throughout the interview, the interviewer frequently interacted with the participant to clarify a response or probe for additional information. The interview sessions were approximately 90 minutes. Except for the initial three interviews, all sessions were audio recorded to permit subsequent detailed examination; notes were taken throughout the session.

The interview questions appear in Appendix D. Using the offensive or defensive scenario as the basis for the interview, the key items asked what the Brigade must do to successfully accomplish its mission. That is, what critical tasks must be performed for the Brigade to succeed. Critical tasks were defined as those tasks which if not performed correctly would seriously lessen the Brigade's probability of success.

This report addresses only those interview questions that deal with the identification of Brigade tasks (Question 2, 8, 9, 10) as opposed to tasks performed at other levels. Of these four questions, only Question 2 was included in the first few interviews. Examination of the initial results allowed modification of the interview to gather important clarifying information from the remaining participants. After the initial five interviews, Questions 8 and 9 were developed to gain insight into which tasks represented new responsibilities for the Brigade. Question 10 was added after the sixth interview for similar purposes. The formative development of this interview thus resulted in all eleven interviews containing Question 2, the last six interviews including Questions 8 and 9, and the final five interviews including Question 10.

RESULTS OF APPLYING THE APPROACH

Lessons Learned

The methodology of developing scenarios and conducting semi-structured interviews to identify future Brigade tasks yielded several interesting insights. First, the ease and relaxed manner of the participants was evident from the beginning of the interview. This could, at least partially, be attributed to the participant knowing the context of the interview and content of the scenario. The participants were on familiar ground: they were presented with a military situation and were asked what tasks must be performed for mission accomplishment. The participants could draw upon their extensive experience to answer questions of this sort.

However, when the interview questions diverged from the participant's direct experience and first hand knowledge, the volume and informational value of their responses was reduced.

This was evident in questions concerning how to measure task performance during training (Questions 3, 5, and 7). These questions would be more appropriately posed to observer/controllers or training analysts who have the expertise in this area. Also, the open-ended nature of the interview wasn't conducive to extracting information which was not readily forthcoming. A questionnaire employing a forced-choice format (introducing an element of recognition versus the free recall of the interview) could have yielded more information and should be considered for use during future interviews. A follow-up interview focusing on the means of measuring the performance of tasks identified in the initial interview could also be conducted. In this case, the participant's task list would be used as the read ahead material for the subsequent interview.

Findings From the Interview Questions

Question 2. The most frequent responses to Question 2 (... what critical tasks must be performed at the Brigade level...) are presented in Table 1. Tasks noted in this table were cited by at least 50% of the officers from either of the scenarios.

The one task considered to be critical by all the participants was the need for reconnaissance and IPB (intelligence preparation of the battlefield). The consensus was that it is imperative that for the Brigade to gather all the intelligence it can regarding the enemy and the battlefield terrain in order to successfully plan the battle. During reconnaissance, the Brigade attempts to determine the enemy's size, location, intent, and possible avenues of approach. Gathering information on the terrain allows commanders to select likely areas for travel, concealment and weapons emplacement. The continuing need for reconnaissance is noted in Task 7. The application of terrain analysis and aspects of knowing the enemy's intent are used in Task 13 when creating the obstacle plan.

The second most-cited task was the need to rehearse the battle. The officers viewed rehearsals as an investment. Rehearsals allow: subordinates to demonstrate understanding of the plan; visualization of the plan which may indicate some deficiencies; spacial and temporal orientation to facilitate coordination. Brief-back of orders (Task 11) was the minimally accepted form of rehearsal. It is also interesting to note that Task 8 (supervise execution of orders) was mentioned more by the defensive participants. Perhaps this defensive scenario created more of an opportunity for supervision than for rehearsal.

Table 1. Most Frequently Cited Brigade Tasks

SCENARIO		TASK	
DEF N=5	OFF N=6	TOTAL N=11	
5	6	11	1. Reconnaissance and IPB: CO and S2 must understand: terrain, size/location/intent of enemy, fit troops to terrain.
3	6	9	2. Rehearse battle.
4	4	8	3. Use of planning time: one third/two thirds rule.
2	5	7	4. Issue operations order, face to face with Bn commanders if possible.
4	3	7	5. Task organizes to position troops.
3	3	6	6. Issue warning order.
3	3	6	7. Continue reconnaissance.
4	1	5	8. Supervise execution of operations order.
-	5	5	9. Plan resupply effort.
4	-	4	10. Re-establish FSB functions.
1	3	4	11. Receive brief-back of orders from Bn commanders.
-	4	4	12. Bde commander coordinates with all support elements and adjacent brigades.
3	-	3	13. Plan creation of obstacles to channel enemy approach.

The third most cited task (use of planning time) is more of a principle or process rather than a task. However, it is recorded here because of its importance. The soldiers felt very strongly that as much preparation time as possible be available to the lower echelons. The issuance of warning orders (Task 6) has a similar purpose by providing an early warning during which the lower echelons are alerted and can prepare.

The fourth most frequently noted task was the issuing of operations orders, face-to-face with battalion commanders, if possible. The offensive participants noted this task more frequently than the defensive participants. Possibly, this is a scenario-specific artifact: the Brigade is suddenly cutoff from the division, under fire and must defend its position. Perhaps it did not seem feasible to the defensive participants that either a face-to-face OPORD or a rehearsal (Task 2) were feasible under these circumstances.

Tied for fourth is "task-organizes to position troops". This task refers to determining what combat actions to take, integrating the combat assets necessary to perform the action, and finally positioning those assets on the battlefield to their best advantage. This integration and coordination of assets is also reflected in Task 12. Here the Brigade commander coordinates with adjacent Brigade commanders to ensure their actions are mutually supportive. This task was not reported by the defensive participants because that scenario had no other Brigades with which to coordinate.

Task 6 (the issuing of warning orders) has also been noted in reference to "use of planning time" (Task 3). By giving an early estimate of the situation to be encountered, the Brigade commander can remove a great deal of uncertainty from the situation. The battalion commanders can then focus on what is known about the impending mission and initiate the preliminary preparations of the lower echelons. One Desert Storm respondent advocated employment of a series of warning orders, each with increasing detail of the mission, to accommodate simultaneous preparation at all echelons. This would facilitate maximum preparation time for the specific activities that the mission would require.

The two remaining frequently cited tasks are closely related. These are "plan resupply effort" and "re-establish FSB functions" (Tasks 9, 10, respectively). Planning the resupply effort is critical for maintaining an adequate flow of food, fuel, ammunition, and parts to the combat forces. In the defensive scenario, the provider of these assets, the forward

support battalion (FSB) has been destroyed. The Brigade must now operate with the supplies it has on hand. This entails both the conservation and distribution of those supplies within the Brigade.

Other tasks less frequently mentioned as being critical at the Brigade level are noted in Table 2.

Question 8. The final six officers were asked which of the Brigade tasks they noted as critical represent a departure from current Brigade operations. There were few tasks mentioned. However, two general concepts emerged from their responses. The first concept was sustaining the force with the supplies on hand because resupply would not be available. The second concept concerned increased reconnaissance responsibilities and need for increased reconnaissance capabilities because no intelligence would be forthcoming from upper echelons. The need for adequate communications within the Brigade to maintain situational awareness including reconstituting lost capabilities was also noted. Tasks also mentioned for future operation included: linkage with aviation assets, identification of friend or foe (IFF), and staff planning for contingencies and the follow-on mission.

Table 2. Less Frequently Cited Brigade Tasks

SCENARIO		TASK	
DEF N=5	OFF N=6	TOTAL N=11	
2	2	4	1. State courses of action: tentative plans.
2	2	4	2. Bde commander coordinates and synchronizes Bn commanders's plans.
2	1	3	3. Battle-induced refinement of plan.
1	2	3	4. Plan for success: planning beyond initial battle.
1	2	3	5. Establish passage of lines plans.
2	-	2	6. Bde commander makes his estimate of the situation.
-	2	2	7. Determine readiness of combat vehicles.
1	1	2	8. Bde commander gives broad guidance on mission to Bde staff and Bn commanders.
1	1	2	9. Receive FRAGO from Div and understand its intent.
1	1	2	10. Identify targets to kill.
2	-	2	11. Establish counter - reconnaissance screen.
1	1	2	12. Prevent fratricide.
1	1	2	13. Plan for using all combat assets available (including special attachments & assets not part of T, O, & E)
2	-	2	14. Maintain security zone around defensive perimeter.
-	2	2	15. Bde staff needs to know how to request additional assets from Division.

Table 2. Continued

SCENARIO			TASK
DEF N=5	OFF N=6	TOTAL N=11	
1	1	2	16. Issue FRAGOs.
-	2	2	17. NBC - decontamination and resupply.
1	-	1	18. Move troops.
1	-	1	19. Create deception plan.
-	1	1	20. Engage enemy.
-	1	1	21. Isolate enemy positions.
1	-	1	22. Improve bridge crossing.

Question 9. A list of Brigade tasks was compiled from the results of the first five interviews. Each of the final six officers was asked to select from the list those tasks which they thought represented a change from the way Brigades currently operate. Few tasks represented a change. Only two tasks were selected more than once. Both "prevent fratricide" and "create deception plan" were mentioned by three of the six interviewees. All three agreed that preventing fratricide was important but it was not a Brigade task. While viewed as not currently a Brigade task, two of the three soldiers thought, creating a deception plan is valuable now and would be of increased value in future independent operations.

Question 10. This question was presented to the final five officers. These officers were again presented the compiled task list and were asked to select those tasks which they thought would be critical in future Brigade operations. At least 60% of the officers noted four tasks as being critical. These tasks apply to all forms of maneuver and types of operation. These tasks are:

- a) plans for success
- b) plans resupply effort
- c) reconnaissance and IPB
- d) task-organizes battle

The most salient task "plans for success" entails planning beyond the initial battle. This would consider how the combat assets are positioned after the initial battle in order to best continue the mission. A large part of this consideration is a full and complete understanding of the commander's intent for the mission. By knowing the commander's intent, actions contingent upon the enemy's response can be taken quickly without the commander's expressed approval.

The task "plans resupply effort" was also deemed as being critical. With the M1 tank consuming 500 gallons of fuel every 6-8 hr of operation, it is necessary for resupply plans to be made properly. One Desert Storm battalion commander remarked that resupply is the lynchpin of independent operations.

Another aspect of independent operations which will have an increased importance is the task "reconnaissance and IPB." The Brigade will need increased intelligence assets to assess the enemy situation and terrain conditions. Knowing the enemy size, combat assets, location and intent will allow the Brigade to use terrain features to their best advantage to defeat the enemy.

The final frequently mentioned task is "task-organizes battle." This entails determining combat actions to be performed and assembling the required combat forces to execute those actions. This would include full utilization of any additional combat assets assigned to the brigade for this mission. Task-organizing while the brigade is moving to contact will also be important.

A final note. Included as Appendix E, are the responses of a Desert Storm armored cavalry squadron commander. He responded to Question 2 by indicating what tasks should be performed in training in order for the Brigade to be successful in future operations. His responses reflect his experiences in the Gulf War and indicate areas where he felt a deficiency was evident.

CONCLUSIONS

This report presents an approach that researchers can use to gather information from subject matter experts without biasing or constraining their responses. Central to this approach is the creation of a context to which the participants can respond in an open, non-evaluative atmosphere. For this effort, the context was established in the read ahead packet which stated the rationale and the objective for the research and presented a military scenario which the participant could examine at length. Only after having studied the scenario and being familiarized with the objective of the research (via both the read ahead packet and the now present researcher), were the participants interviewed. The interviews were tape recorded which allowed the researcher to: talk with the participant, to concentrate on what was being said, and to examine the interview-information in detail afterwards. Procedural features of the approach include:

1. development of representative scenarios,
2. testing of scenario formats,
3. using the scenario as the basis for the interview,
4. formative modification of questions based upon initial results.

This approach was applied with a small sample of officers in attempting to indicate the responsibilities of future Brigades. The preliminary results indicated that when the responses to Questions 2, 8, 9, and 10 are viewed together, the following actions will have increased importance for Brigades in the future:

1. Reconnaissance
2. Rehearsal
3. Issuing warning orders
4. Logistics planning
5. Full utilization of combat assets
6. Planning beyond the initial battle

APPENDIX A
Interview Offensive Scenario

OFFENSIVE SCENARIO

You are the commander of the 1st Brigade, an armor heavy brigade. The division's mission is to attack two enemy motorized rifle battalions to the west in the vicinity of Crossroads City and to continue the westward attack.

You will be attacking as the division's northern element with the 2d Brigade along your left flank. Your immediate responsibility will be the enemy battalion to the north of the city. You also have to plan to press the offensive to the west if early success is achieved. The 3d Brigade will be held in reserve.

The 1st Bde has two tank battalions, two mech infantry battalions, one field artillery battalion in direct support, one engineer battalion, and a forward support battalion. It also has available an acquisition battery, an air defense battery, an armored cavalry troop, and an OPCON aviation company.

The 2d Bde has two mech infantry and one tank battalion, one field artillery battalion in direct support, and a forward support battalion. It also has an air defense battery, an engineer company and an OPCON aviation company.

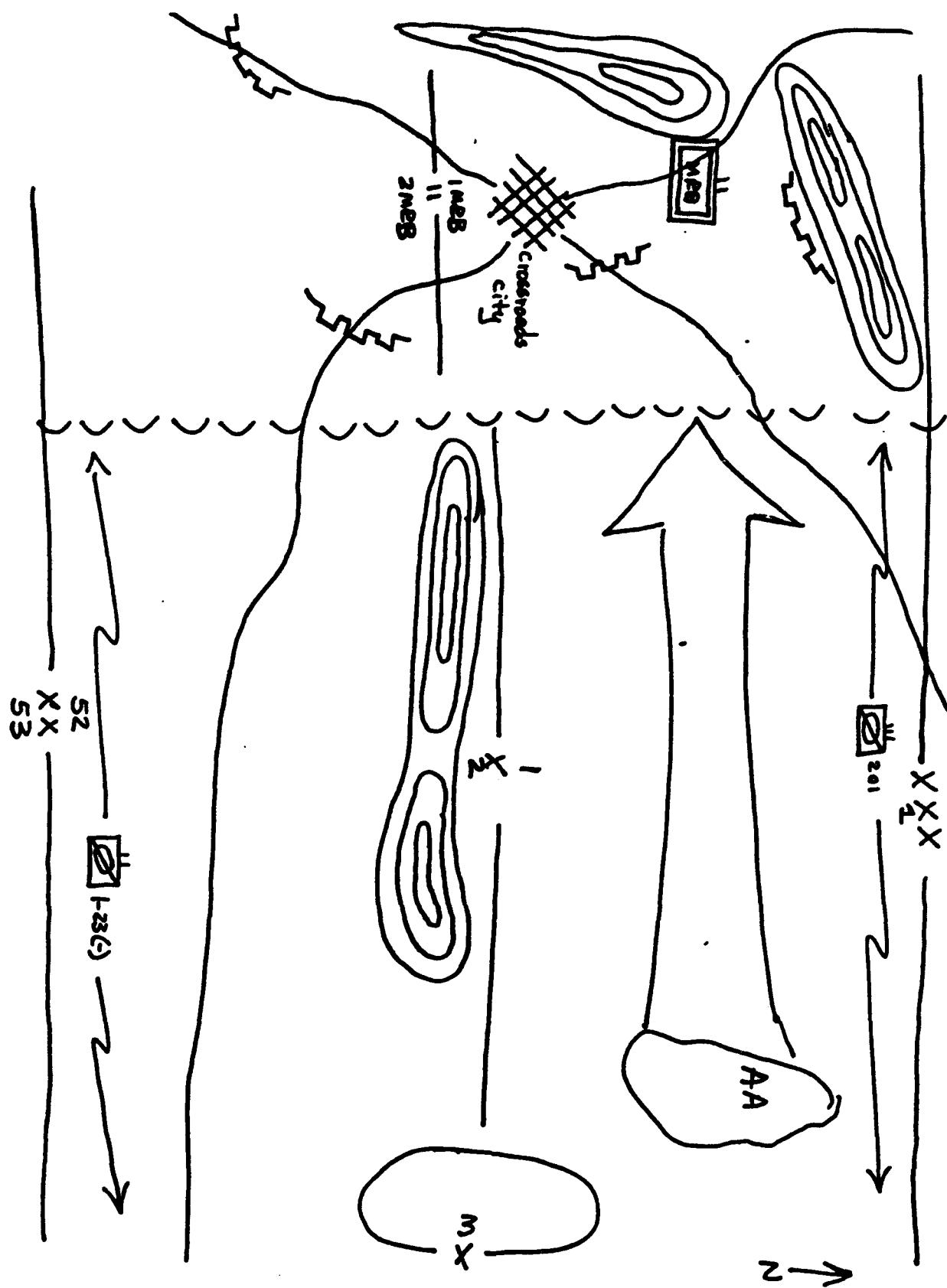
The 3d Bde has two mech infantry battalions, a tank battalion, a forward support battalion, and an engineering company.

The 53d Mech Div on the division's left attacks as part of 1st Corps attack; our divisional ACR, the 1-23 Cav(-), screens the inter-division boundary to maintain contact with the 53rd. The 201st ACR screens the Corps' (and Division/Bde) northern boundary.

You are responsible for conducting the main attack to destroy the enemy forces, to create a penetration to the front of the division and facilitate the passage of follow-on brigades as the corps continues its offensive to the west. Your brigade is currently located in an assembly area preparing for this operation. You are opposed by an enemy MRB conducting a deliberate defense to the north of Crossroads City.

Based upon the possibility of early success by your brigade, you have to be prepared to exploit the situation and continue the attack, possibly as an autonomous force. Because the battlefield is not purely linear, it is possible you might have to function for periods of time with interrupted communications to Division Headquarters and without continuous contact with adjacent units.

We will be asking you questions regarding critical tasks which must be performed at the brigade, battalion, and company levels in order to successfully accomplish the Bde mission. This includes your potential follow-on mission to operate as a semi-independent force attacking deep forward of the current Corps zone.



APPENDIX B
Interview Defensive Scenario

DEFENSIVE SCENARIO

You are the heavy brigade commander. Heavy brigade (two tank battalions, two mech infantry battalions, an artillery battalion, an engineer battalion, and an air defense battery) attacking to the east as the lead element of a division in a penetration/exploitation mission. The division is leading the corps attack.

Brigade mission was to seize and hold a bridgehead, pass the remainder of the division over the river, then continue the attack as the division reserve.

Bridgehead seized without fighting. Engineers constructed bridge. While brigade was in the process of projecting combat forces across the river, the enemy counterattacked on the division flank from the north with a reinforced brigade-sized unit. Finding a seam between the rear area of your brigade and the remainder of the division, the enemy force overran and totally destroyed the brigade's forward support battalion (FSB) and a reinforcing artillery battalion, both of which had been trailing the brigade's combat formation.

Currently, your brigade has one tank battalion, one infantry battalion, the artillery battalion, and one ADA platoon on the far side of the river. They are not in contact with any enemy forces. They have begun to recon to the east of the bridgehead.

The brigade's engineer battalion is manning the crossing site.

The brigade still has one tank battalion, one infantry battalion, and three ADA platoons are on the near side of the crossing. There is light to moderate sporadic contact with the enemy's counterattack force.

Other than the brigade's FSB and reinforcing artillery battalion, which were totally destroyed, friendly casualties have been light.

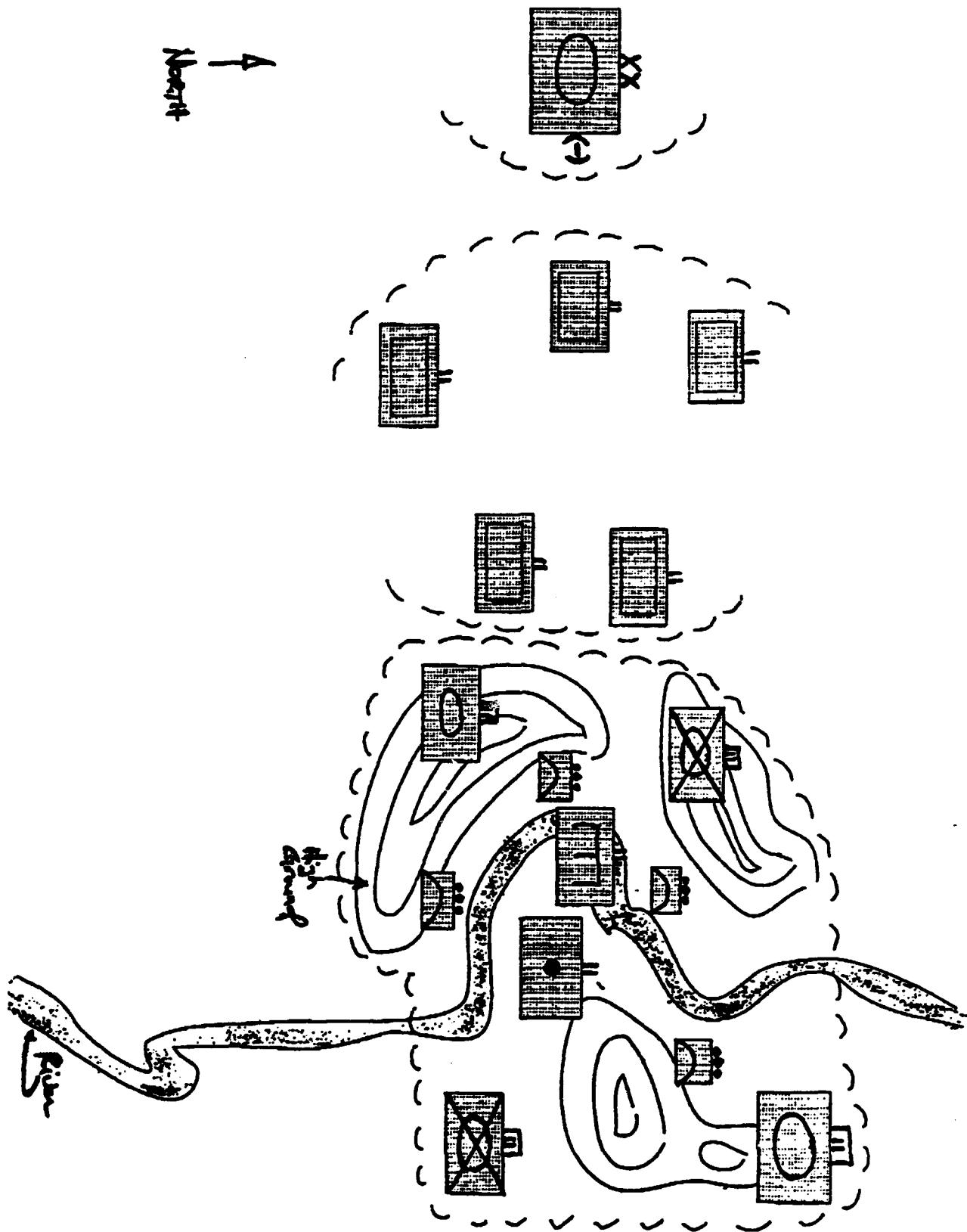
The enemy is positioned to your rear with at least two heavy battalions in contact with those rear elements. At least three enemy heavy battalions are attempting to fix the remainder of the division. The enemy has an unknown amount of artillery, but is continuously interdicting the bridgehead crossing site. Chemical munitions have not been employed by either side.

Because of current force ratios (division main body has four tank battalions and two infantry battalions vice a minimum of three enemy heavy battalions), it will take a minimum of 24 hours for the division to mount a deliberate attack to link-up with the brigade and cross the river.

The enemy's ability to reinforce his counterattack force is unknown in terms of time and size of force. However, his most likely course of action is to attempt to delay the division, probably by reducing/neutralizing the bridgehead.

Very heavy winds and rain are expected to preclude close air support and attack helicopter operations for the next 36-48 hours.

The brigade's current mission is to hold the bridgehead until the division link-up.



APPENDIX C
Interview Introductory Page

TRAINING STRATEGIES FOR U.S. ARMY BRIGADES

The U.S. Army Research Institute (ARI) is a field operating agency for the Deputy Chief of Staff for Personnel (DCS PER). With its headquarters in Alexandria, Virginia, it has 300 personnel and 12 field units located at Army posts throughout the United States.

ARI has a Research and Development program to investigate strategies for improving training of large units such as Brigades, while at the same time, accommodating new force structures and reduced training budgets. For example, to engage in mid-intensity types of conflicts, future Army brigades may prepare to fight campaigns that (a) entail nonlinear operations (rapid movement and intermingling with opposing forces that blurs the distinction between front and rear), (b) long-range and highly lethal weapons systems, and (c) wide-ranging sensors and communications. They must anticipate highly fluid battlefields and interrupted communications such that subordinate leaders will be required to act on their initiative within the framework of the commander's intent.

This research, therefore, has two main thrusts:

- (1) determine tasks that need to be trained which account for the evolving doctrine for large units/Brigades to operate as detached forces.
- (2) determine ways to assess the effectiveness of that training.

We're meeting with officers who have experience or insights into what Brigades must do to operate as detached forces. We have scheduled a meeting with you in the near future. In preparation for that meeting, please read over the enclosed offensive scenario. We will use the situation described in this scenario to ask you to identify the critical tasks which 1st Brigade must be able to perform in order to successfully accomplish its mission. This situation is not intended to constrain your thinking. Rather, it is designed to serve as a context to stimulate thoughts, ideas, and opinions you might have regarding critical tasks, assessing task accomplishment during training, and suitable training technology to support training to standard on these tasks.

APPENDIX D

**Interview Questions Including
Compiled Task List**

QUESTIONNAIRE TO BE ADMINISTERED DURING INTERVIEW

1. Did you have an opportunity to look over the read ahead packet we sent you prior to this visit? (If not take about 5 minutes to either go over it or allow the interviewee read it to himself).

2. For this brigade deliberate attack mission, what critical tasks must be performed at the Brigade level in order for the Brigade to successfully accomplish the mission assigned by the division commander?

*
*
*

3. For each task you listed above, what performance measure could be used to determine if the task was performed successfully during training? That is, how could the performance of that task be measured in a training situation?

*
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4. What critical tasks must be performed at the Battalion level to insure 1st Brigade is successful in its deliberate attack? We would be especially interested in those generic tasks which might apply to a variety of units: infantry, mechanized infantry, armor, field artillery and armored cavalry.

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5. For each battalion task listed above, again indicate an appropriate performance measure which could be used in training, to determine when the task has been performed successfully.

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6. What critical tasks must be performed at the Company level for a successful offensive mission? Again, we're looking for generic, rather than branch - unique tasks.

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7. For each company task listed above, what performance measure would be used in training to determine if the task was performed successfully?

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8. Which of the brigade tasks that you've noted as being critical, represent a change from the way brigades currently operate? (Read list of Bde tasks from interview notes).

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9. Which of these tasks (hand interviewee the compiled list of tasks from the first 5 interviews) represent a change from the way brigades currently operate? (Explain that list was compiled from both offensive and defensive scenarios and are listed in a random order)

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10. Which of these tasks (using same list) do you think will be critical in future conflicts where the brigade would be operating as:

- 1) a detached force,
- 2) in nonlinear operations,
- 3) with long range highly lethal weapon systems,
- 4) highly fluid battlefield,
- 5) with interrupted communications such that subordinate leaders will be required to act on their,
- 6) own initiative within the framework of the commander's intent?

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11. That completes our tasks and performance measures questions. Now we would like to ask for some background information about you. This data, as well as your answers will be strictly confidential. We will only use the background information to perform correlation analyses between our respondents.

- a. Rank
- b. Branch
- c. Years of Service
- d. Command experience

1. Issue operations order, face to face with Bn commanders if possible.
2. Improve bridge crossing.
3. Reconnaissance and IPB: Co and S2 must understand terrain, size/location/intent of enemy.
4. Move troops.
5. Continue reconnaissance.
6. Rehearse battle with Bn commanders.
7. State courses of action: tentative plans.
8. Prevent fratricide.
9. Isolate enemy positions.
10. Task organizes battle: determines combat actions to be performed; assembles required combat forces.
11. Supervise execution of operations order.
12. Re-establish FSB.
13. Receive FRAGO from Div and understand its intent.
14. Plan resupply effort.
15. Battle-induced refinement of plan.
16. NBC - decontamination and resupply.
17. Create deception plan.
18. Plan creation of obstacles to channel enemy approach.
19. Use of planning time: one third/two thirds rule used.
20. Establish passage of lines plans.
21. Establish counter - reconnaissance screen.
22. Identify targets to kill.
23. Engage enemy.
24. Issue warning order. Makes commander's estimate for Bde staff and Bn commanders.
25. Plan for success: planning beyond initial battle.

12. Our ultimate goal in this research is to develop a methodology to assist training developers determine the types of training environments and technologies which are able to support the training of critical tasks. Therefore, we would like to also solicit your input on training events and resources.

a. Have you had any experience with training devices and simulators?

Which ones?

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b. Are there any particular training devices/environments (e.g., NTC, SIMNET, COFT) which are absolutely essential to training the tasks to standard which you indicated were critical?

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13. What other suggestions or recommendations do you have which could help us determine the critical tasks for Brigade operations?

Thank you for your time, attention and cooperation.

APPENDIX E

**A Desert Storm Armored Cavalry Commander's
Responses to Question 2**

OFFENSIVE
ORDER GIVEN/TASK

Interviewee approached the question as "what tasks need to be trained in order to accomplish the mission"; rather than which tasks need to be performed to accomplish the mission.

1. Concept of reconnaissance: can not enter the situation blind; must have someone on the ground to see what the battleground looks like on the other side of the LD; see what the enemy is doing, (forward vs reverse slope defense), what obstacles are in place, the condition/drive-ability of the roads.
2. Air/ground coordination: with Attack Company (of helicopters) as well as any JAAT (joint services); attack company commander must be in the planning/rehearsal loop with the Bde commander; air dimension is critical.
3. "Deep attack" lookers and shooters: deep attack is possible at every echelon (it is all relative); however deep attack is the early disruption of enemy forces which you'd otherwise have to face on the battlefield or deal with later. Bde must assign, plan for and rehearse, who is to see/identify targets (lookers) and who "brings ammunition to bear" on the target (the shooter).
4. Perform battle sequencing: plan of how you anticipate the battle to unfold (progress); anticipating the enemy response to your action and your response to it.
5. Logistics for resupply: timing of when to refuel on the move (also training that refueling activity).
6. Integrate fire support into maneuver and battle plans to enhance combat capability rather than confuse the situation.
7. Plan for using all combat assets available, especially those assets not in your TO&E. This would be an institutionalized planning with rehearsals; not something which is first done after receiving the task organization for an operation.
8. Appreciation for flank units, dedicating some assets for flank unit coordination; this is not considered in training where beyond the boundaries of Bde are considered as being off the face of the earth.
9. Dedicate assets and drills for ADA early warning network.
10. JAAT: understanding the battle rhythm of the aviation community so that it can be used effectively.

11. Bde staff needs to know how to get additional assets from Div.
12. Rehearsals are essential, down to company-level. Brief backs are good yet are not a substitute for the coordinated action/visualization a rehearsal promotes. Advocates use of standardized supplies to be kept a box for conducting the duck-walk (rock drills).
13. "Show-me factor:" Bde commander needs to see, in training, the proficienc of his troops on various tasks, before he can commit those troops to perform those tasks in combat.
14. Control of dismounted infantry: how to get them in, how to support them, how to get them out.